INSTRUCTIONS

-J00597 REV. 2013-11-01

HARLEY-DAVIDSON 12 VOLT BATTERIES

GENERAL

Kit Numbers

66006-70, 66007-84

Models

For model fitment information, see the P&A retail catalog or the Parts and Accessories section of www.harley-davidson.com (English only).

This instruction sheet provides service information for DRYCHARGED batteries.

There are no Service Parts available with this product.

⚠WARNING

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333a)

NOTE

This instruction sheet references Service Manual information. A Service Manual for your model motorcycle is required for this installation and is available from a Harley-Davidson Dealer.

⚠WARNING

Engine exhaust from this product contains chemicals known to the State of California to cause cancer, and birth defects or other reproductive harm. (00004f)

⚠WARNING

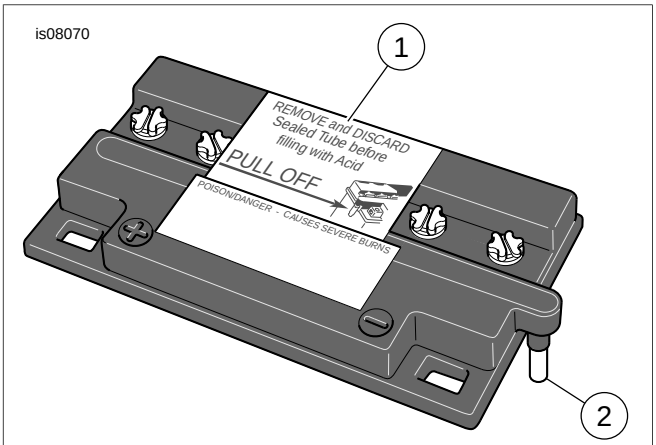
Do not run motorcycle in a closed garage or confined area. Inhaling motorcycle exhaust, which contains poisonous carbon monoxide gas, could result in death or serious injury. (00005a)

⚠WARNING

Batteries, battery posts, terminals and related accessories contain lead and lead compounds, and other chemicals known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (00019e)

⚠WARNING

Batteries contain sulfuric acid, which could cause severe burns to eyes and skin. Wear a protective face shield, rubberized gloves and protective clothing when working with batteries. KEEP BATTERIES AWAY FROM CHILDREN. (00063a)



1. **Tag**
2. **Sealed tube**

Figure 1. Reminder Tag/Sealed Shipping Tube

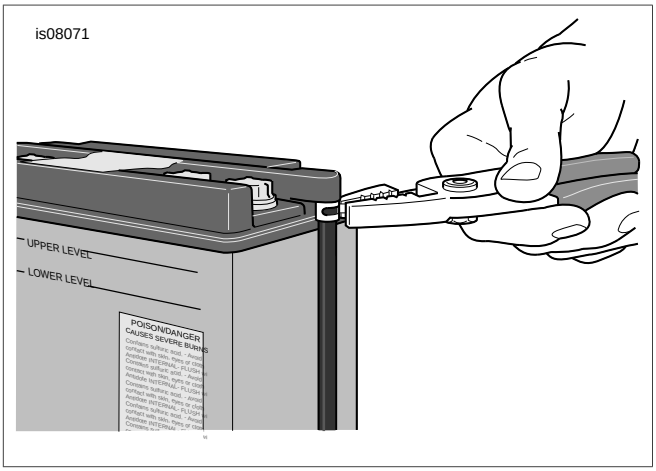


Figure 2. Vent Tube Clamp (only smooth vent elbow requires clamp)

Activate Battery

1. Place battery on a level surface.

Many Harley-Davidson® Parts & Accessories are made of plastics and metals which can be recycled. Please dispose of materials responsibly.

NOTICE

Remove battery from motorcycle before charging. Electrolyte leakage will damage motorcycle parts. (00213a)

2. See Figure 1. Remove reminder tag and short sealed tube from battery vent elbow.

⚠WARNING

A sealed tube which is left in place could cause a buildup of internal gas pressure. Internal gas pressure can cause a battery to explode causing death or serious injury. (00641c)

3. Verify that battery vent elbow is dry and clean and install long vent tube as follows:
   a. See Figure 2. On models with a smooth vent elbow, clamp long vent tube to elbow of battery. Rotate prongs of clamp toward side of battery.
   b. On models with a barbed vent elbow, install long vent tube over elbow of battery.
   c. Place other end of long vent tube in a suitable container to collect any electrolyte which might overflow through vent tube.
4. Remove all battery cell filler caps.

⚠WARNING

Never remove warning label attached to top of battery. Failure to read and understand all precautions contained in warning, could result in death or serious injury. (00064a)

NOTE

ANTIDOTE

- *EXTERNAL: Flush with water.*
- *INTERNAL: Drink large quantities of milk or water followed by milk of magnesia, vegetable oil or beaten eggs. Call doctor immediately.*
- *EYES: Flush eyes with water and get immediate medical attention.*

5. Carefully fill each cell of battery with electrolyte (diluted sulfuric acid) of 1.265 specific gravity. Fill to indicated upper level. Let battery stand for 1/2 hour.

NOTE

- *DO NOT ACTIVATE BATTERY WITH WATER OR ANY LIQUID OTHER THAN DILUTED SULFURIC ACID.*
- *Electrolyte should be at room temperature (approximately 70° F/21° C) before filling.*

6. After 1/2 hour, gently tap battery to dislodge air bubbles from cell plates. If electrolyte level has fallen during standing, refill battery with electrolyte to upper level.
7. Install filler caps.

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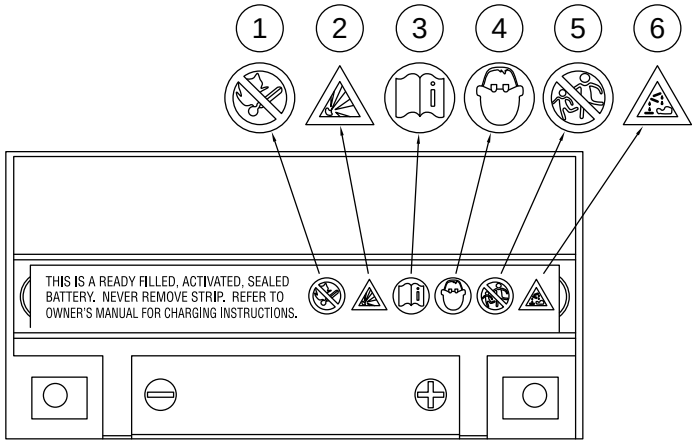

1. **Keep flames away**
2. **Contents are explosive**
3. **Read instructions**
4. **Wear safety glasses**
5. **Do not allow children to play with battery**
6. **Contents are corrosive**

Figure 3. Battery Warning Label

Charge Battery Safety Precautions

Never charge a battery without first reviewing the manufacturers instructions for the charger. In addition to the manufacturer's instructions, follow these safety precautions:

⚠WARNING

Explosive hydrogen gas, which escapes during charging, could cause death or serious injury. Charge battery in a well-ventilated area. Keep open flames, electrical sparks and smoking materials away from battery at all times. KEEP BATTERIES AWAY FROM CHILDREN. (00065a)

- Always wear proper eye, face and hand protection.
- Always charge batteries in a well-ventilated area.
- Turn the charger OFF before connecting the leads to the battery to avoid dangerous sparks.
- Never try to charge a visibly damaged or frozen battery.
- Connect the charger leads to the battery; red positive (+) lead to the positive (+) terminal and black negative (-) lead to the negative (-) terminal. If the battery is still in the vehicle, connect the negative lead to the chassis ground. Be sure that the ignition and all electrical accessories are turned off.
- Make sure that the charger leads to the battery are not broken, frayed or loose.
- If the battery becomes hot, or if violent gassing or spewing of electrolyte occurs, turn off the charger temporarily.
- Always turn the charger "OFF" before removing charger leads from the battery to avoid dangerous sparks.

⚠WARNING

Unplug or turn OFF battery charger before connecting charger cables to battery. Connecting cables with charger ON can cause a spark and battery explosion, which could result in death or serious injury. (00066a)

NOTICE

If battery releases an excessive amount of gas during charging, decrease the charging rate. Overheating can result in plate distortion, internal shorting, drying out or damage. (00413b)

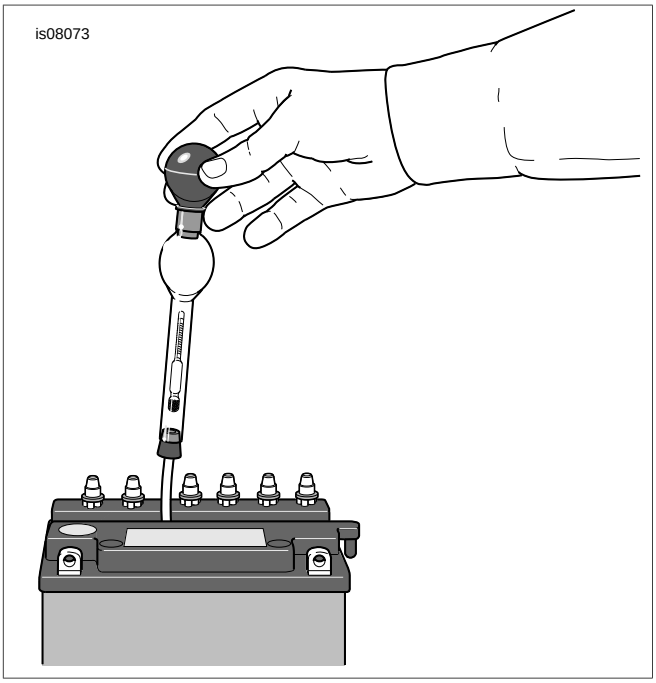

Figure 4. Measuring Specific Gravity of Electrolyte with Hydrometer

NOTES

- *A trickle charger or CHRISTIE charger with a 1 amp charging rate (or less) may be used. However, it will take at least 24 hours for the 100% initial charge with these types of chargers.*
- *The recommended alternative is a variable/tapered rate charger with a maximum charging rate of 2 to 8 amps. With this type of charger, the initial charging rate should be the maximum charging rate for the particular charger (ie. 2 to 8 amps). However, over a period of time, possibly as little as 1 to 2 hours, the charging rate will taper off to near 0 amps. At this point, the battery has probably attained a charging voltage of 14 volts or greater. Continue charging the battery for at least the remainder of the 12 hours total charge time, even though the battery electrolyte has probably attained its proper specific gravity. This additional charging time is necessary to "set" the cell plates in a low-maintenance battery.*

Charge Battery Procedure

NOTICE

Remove battery from motorcycle before charging. Electrolyte leakage will damage motorcycle parts. (00213a)

1. Follow instructions in applicable Service Manual to remove the battery from the motorcycle.
2. Place the battery on a level service.
3. Refer to Table 1. Set battery charger to the recommended charging rate.

Table 1. Recommended Charging Rates

Battery Part No.	Volt	Capacity (AMP-hr.)	Bench Charge Max. Rate
66006-70	12	7.5	1 AMP
66007-84	12	32	3 AMP

⚠WARNING

Unplug or turn OFF battery charger before connecting charger cables to battery. Connecting cables with charger ON can cause a spark and battery explosion, which could result in death or serious injury. (00066a)

NOTICE

Do not reverse the charger connections described in the following steps or the charging system of the motorcycle could be damaged. (00214a)

4. Connect the red battery charger lead to the positive (+) battery terminal.
5. Connect the black charger lead to the negative (-) terminal of the battery.
6. See Figure 4. Charge battery until specific gravity of electrolyte increases to 1.260-1.270 at 80° F (27° C). Measure with HYDROMETER (Part No. HD-96910-35).

NOTES

- *Cell variance must not exceed 0.010 specific gravity.*
- *If recommended charging time has elapsed but specific gravity is still below 1.270 at 80° F (27° C), continue charging until desired specific gravity is attained.*
- *When using a syringe hydrometer, read electrolyte level at bottom of meniscus (curved upper surface of fluid).*
- *Specific gravity changes with temperature differences. When the temperature increases, specific gravity of a typical fluid decreases, and vise versa. If electrolyte temperature in battery is not 80° F (27° C), use the following formula to compute temperature-corrected specific gravity:*

  For each 10° F (5.5° C) above 80° F (27° C), add 0.004 to actual specific gravity reading.

  For each 10° F (5.5° C) below 80° F (27° C), subtract 0.004 from actual specific gravity reading.

  For example:

  Electrolyte temperature 100° F (38° C)

  Hydrometer reading 1.272

  Adjustment for temperature + 0.008

  Corrected specific gravity 1.280

7. After initial charge, gently tap battery to dislodge air bubbles from cell plates.

NOTE

If electrolyte level has fallen, refill battery with distilled water to the upper level and charge an additional 1 - 2 hours.

8. After the battery is fully charged, disconnect the black lead to the negative (-) terminal of the battery.
9. Disconnect the red charger lead from the (+) terminal of the battery.
10. Install all battery filler caps.
11. Wash off any acid spillage from battery using water. Wipe battery dry.
12. Mark charge date on battery.

Install Battery

1. Using a wire brush or sandpaper, clean battery terminals and cable connectors to remove oxidation.
2. Follow instructions in the appropriate Service Manual to install the fully charged battery with vent tube onto motorcycle.
3. Follow the Service Manual instructions to secure battery to battery tray using original mounting hardware.

⚠WARNING

Do not allow positive (+) battery cable to contact ground with negative (-) cable connected. Resulting sparks can cause a battery explosion, which could result in death or serious injury. (00069a)

NOTICE

Connect the cables to the correct battery terminals. Failure to do so could result in damage to the motorcycle electrical system. (00215a)

4. Connect positive cable to positive (+) battery terminal.

NOTE

Be sure to install a spacer (if required) between each cable terminal and battery terminal.

5. After positive cable has been connected to positive terminal, connect negative cable to negative (-) battery terminal.
6. Apply light coat of Harley-Davidson Electrical Contact Lubricant (Part No. 99861-02) to both terminals.

NOTES

- *Route battery vent tube on the vehicle side opposite the secondary drive belt/chain.*
- *Route battery vent tube away from muffler ends.*
- *Battery vent tube has a small slit near each end of tube. The slit near battery vent elbow provides a pressure release for battery gases should bottom of tube become obstructed. Trim loose end of vent tube as necessary after vent tube is installed and routed.*

7. Route battery vent tube per Service Manual, making sure that it does not become kinked or obstructed, that it does not chafe or touch any moving parts, and that its outlet is directed away from any metal component.
8. Following the Service Manual, install motorcycle seat and any other components.

⚠WARNING

After installing seat, pull upward on seat to be sure it is locked in position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070b)

Store and Maintain Battery

Check battery electrolyte level after the first 500 miles. Thereafter, check battery electrolyte level after every 500 miles or every week on conventional batteries and after every 5,000 miles or once a month on low-maintenance batteries. Check and clean battery terminals each time you check the electrolyte level.

If motorcycle will not be operated for several months, such as during the winter season, remove the battery from the motorcycle and charge the battery until the correct specific gravity is obtained. Refer to the Service Manual for detailed instructions.

If the battery is stored at temperatures below 60° F (16° C), charge the battery every month (according to Service Manual instructions). If stored in a warm area, above 60° F (16° C), charge battery more frequently than once a month.

⚠WARNING

Batteries contain sulfuric acid, which could cause severe burns to eyes and skin. Wear a protective face shield, rubberized gloves and protective clothing when working with batteries. KEEP BATTERIES AWAY FROM CHILDREN. (00063a)

⚠WARNING

Explosive hydrogen gas, which escapes during charging, could cause death or serious injury. Charge battery in a well-ventilated area. Keep open flames, electrical sparks and smoking materials away from battery at all times. KEEP BATTERIES AWAY FROM CHILDREN. (00065a)

⚠CAUTION

Batteries can explode or leak and cause burn injury, if recharged, disposed of in fire, mixed with a different battery type, inserted backwards or disassembled. Replace all used batteries at the same time. Do not carry batteries loose in your pocket or purse. Do not remove the battery label. Keep batteries away from children. If swallowed, consult a physician at once. (00620b)

NOTICE

Do not allow battery to completely discharge. The electrolyte in a discharged battery will freeze. The more discharged a battery is, the more easily it can freeze and crack the battery case. (00218a)

Table 2. State of Charge

State of Charge	Voltage	Charge Period
100%	13.0V	None
75%	12.8 V	3-5 hours
50%	12.5 V	4-7 hours
25%	12.2 V	10 hours